

WHAT IS CLAIMED IS:

1. A method of compensating signal distortion of one-tap equalizer bank for an orthogonal frequency division multiplexing (OFDM) system, which compensates the subcarrier signal distortion in an OFDM system caused by multi-path fading channels by using one-tap equalizer bank, characterized by:

compensating the signal distortion by calculating a tap-value of an equalizer for one subcarrier using the tap-values of the equalizers for adjacent subcarriers.

2. A method of compensating signal distortion of one-tap equalizer bank for an OFDM system as claimed in claim 1,

wherein said tap-value of an equalizer is calculated by the following equation:

[Equation 6]

$$C_k = f(C_{k-1}, C_{k+1}),$$

where, C_k is tap-value of an equalizer for k -th subcarrier.

3. A method of compensating signal distortion of one-tap equalizer bank for an OFDM system as claimed

in claim 1 or 2,

wherein said tap-value of an equalizer is calculated by a linear interpolation method expressed by the following equation:

5 [Equation 7]

$$C_k = \frac{C_{k-1} + C_{k+1}}{2},$$

where, C_k is tap-value of an equalizer for k -th subcarrier.

10 4. A method of compensating signal distortion of one-tap equalizer bank for an OFDM system as claimed in claim 3,

wherein said linear interpolation method is characterized in that:

15 addition is carried out by a full-adder; and
division is carried out by a wired shift operation, which moves the output of the full adder to 1-bit to the right. of the equalizers for adjacent subcarriers.